Reply to Office Action of September 14, 2005

Docket No.: 112020.129 US2 (NAN-6)

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (previously presented) An assembly including a substrate and a conductive trace disposed on the substrate, wherein the trace includes a plurality of unaligned nanotubes for providing a plurality of conductive pathways along the trace.

- 2. (previously presented) The assembly of claim 1 wherein the nanotubes include single walled carbon nanotubes.
- 3. (previously presented) The assembly of claim 1 wherein the nanotubes include multi-walled nanotubes.
- 4. (previously presented) The assembly of claim 1 wherein the nanotubes have different lengths.
- 5. (previously presented) The assembly of claim 1 wherein the nanotubes include nanotubes having a length shorter than the length of the article.
- 6. (previously presented) An assembly including a substrate and a conductive trace disposed on the substrate, wherein the trace includes an electrical network of a plurality of unaligned nanotubes in contact with other nanotubes to provide a plurality of conductive pathways along the trace.
- 7. (original) The assembly of claim 6 wherein the nanotubes include single walled carbon nanotubes.
- 8. (original) The assembly of claim 6 wherein the nanotubes include multi-walled carbon nanotubes.
- 9. (original) The assembly of claim 6 wherein the nanotubes have different lengths.

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10. (original) The assembly of claim 6 wherein the nanotubes include nanotubes having a length shorter than the length of the ribbon.

- 11. (previously presented) An assembly including a substrate and a conductive trace of predefined shape, the conductive trace being over the substrate, the conductive trace including a plurality of unaligned nanotubes for providing a plurality of conductive paths along the extent of the trace.
- 12. (previously presented) An assembly including a substrate, at least one metal electrode, and a conductive trace of predefined shape, the conductive trace being over the substrate, the conductive trace including a plurality of unaligned nanotubes for providing a plurality of conductive paths along the extent of the trace, and the metal electrode being over at least a portion of the conductive trace, the metal electrode being formed by a metallization step.
- 13. (previously presented) A wafer substrate structure having a non-woven fabric of unaligned nanotubes covering a major surface of the wafer substrate and wherein the nanotubes of the fabric are arranged in accordance with inherent self-assembly traits of the nanotubes.
- 14. (previously presented) A wafer substrate structure having a non-woven fabric of unaligned nanotubes covering a major surface of the wafer substrate and wherein the fabric is substantially a monolayer of nanotubes.
- 15. (previously presented) A wafer substrate structure having a non-woven fabric of unaligned nanotubes covering a major surface of the wafer substrate and wherein the fabric has a controlled density of nanotubes.